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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,127	10/22/2001	Wolfgang Schonberger	A-2986	7101

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EXAMINER	
HINZE, LEO T	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/033,127	SCHONBERGER, WOLFGANG	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-10 and 12-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-10 and 12-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 7-10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al., US 4,089,264 (Jeschke) in view of Dini, US 3,964,386 (Dini) and Dudley, US 1,798,147 (Dudley).

a. Regarding claims 1 and 10:

Jeschke teaches an inking unit (Figure 1)/printing press (col. 1, lines 1-2) in a printing press, comprising an ink-metering device (1, Fig. 1) having at least one metering element (6, Fig. 1) operatively engaging with a roller (2, Fig. 1), said roller being one of an ink form roller and a roller operatively engaging with an ink form roller, and an oscillation device (11,13, Fig. 1) assigned to said metering element for mounting said metering element so that it is oscillatable between: an engaging position and a spaced-away position with respect to the metering element; and a spaced-away position of said metering element in which said metering element is lifted to

an outlet height wherein said metering element is lifted to an outlet height (col. 4, lines 1-15) from said roller.

Jeschke does not teach an outlet height of at least 20 micrometers and less than 40 micrometers; a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller.

Dini teaches a method and apparatus for removing surplus ink on printing cylinders, including: an oscillating metering element (3, Fig. 4); an oscillation frequency in the range of 5 to 200 kHz (col. 2, lines 45-47); an oscillation amplitude from 5 to 30 micrometers (col. 2, lines 52-53); that such an oscillation frequency is advantageous for creating a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge (col. 1, lines 64-68); the invention is applicable to any situation where it is desired to control the thickness of a liquid layer applied to a surface (col. 4, lines 62-64); the invention is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder (col. 1, lines 34-37) and in eliminating inconsistency of tome reproduction of printings (col. 1, lines 45-47).

Dudley teaches an ink-metering device including a metering element (15, Fig. 1) operatively engaging with a roller (14, Fig. 1), and a plurality of glazing rollers (16; Fig. 1) disposed downline from said metering element, each of said glazing rollers being in rolling contact exclusively with said roller. The glazing rollers assure the best possible distribution of ink on the drum (p. 1, lines 60-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jeschke to change the oscillation amplitude to 5-30 micrometers, because Dini teaches that this oscillation amplitude is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tome reproduction of printings, and such an oscillation amplitude creates a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Jeschke to include a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller, because Dudley teaches that glazing rollers assure the best possible distribution of ink on the drum.

b. Regarding claim 2, the combination of Jeschke, Dini, and Dudley substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches wherein said roller has a radial direction; and said oscillation device has a guide guiding said metering element in an oscillation direction deviating in a range from 0° to 20° in said radial direction of said roller (blade 6 moves essentially perpendicular to roller 2, Fig. 1).

c. Regarding claim 3, the combination of Jeschke, Dini, and Dudley substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit wherein said oscillation device has an electromagnetic (11, 13, Fig. 1; "electromagnet," col. 3, line 51) oscillation drive drivingly connected to said metering element.

d. Regarding claim 4, the combination of Jeschke, Dini, and Dudley substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit wherein said oscillation device has a spring (15, Fig. 1) for setting said metering element against said roller.

e. Regarding claim 7, the combination of Jeschke, Dini, and Dudley substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an ink-feeding device (8, Fig. 1) disposed upline of said metering element alongside a peripheral line of said roller.

f. Regarding claim 8, the combination of Jeschke, Dini, and Dudley substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit including at least another metering element assigned to said roller (9, Fig. 2).

g. Regarding claim 9, the combination of Jeschke, Dini, and Dudley substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit wherein said metering elements are mounted alternatingly with one another for removal thereof from said roller (9, Fig. 2).

h. Regarding claim 12:

Jeschke teaches an inking unit (Figure 1)/printing press (col. 1, lines 1-2) in a printing press, comprising an ink-metering device (1, Fig. 1) having at least one metering element (6, Fig. 1) operatively engaging with a roller (2, Fig. 1), said roller being one of an ink form roller and a roller operatively engaging with an ink form roller, and an oscillation device (11,13, Fig. 1) assigned to said metering element for mounting said metering element so that it is oscillatable

between: an engaging position and a spaced-away position with respect to the metering element; and a spaced-away position of said metering element in which said metering element is lifted to an outlet height wherein said metering element is lifted to an outlet height (col. 4, lines 1-15) from said roller.

Jeschke does not teach an outlet height of at least 20 micrometers and less than 40 micrometers; a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller; oscillation at a frequency within a range of 200 Hz to 10 kHz.

Dini teaches a method and apparatus for removing surplus ink on printing cylinders, including: an oscillating metering element (3, Fig. 4); an oscillation frequency in the range of 5 to 200 kHz (col. 2, lines 45-47); an oscillation amplitude from 5 to 30 micrometers (col. 2, lines 52-53); that such an oscillation frequency is advantageous for creating a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge (col. 1, lines 64-68); the invention is applicable to any situation where it is desired to control the thickness of a liquid layer applied to a surface (col. 4, lines 62-64); the invention is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder (col. 1, lines 34-37) and in eliminating inconsistency of tome reproduction of printings (col. 1, lines 45-47).

Dudley teaches an ink-metering device including a metering element (15, Fig. 1) operatively engaging with a roller (14, Fig. 1), and a plurality of glazing rollers (16, Fig. 1) disposed downline from said metering element, each of said glazing rollers being in rolling

contact exclusively with said roller. The glazing rollers assure the best possible distribution of ink on the drum (p. 1, lines 60-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jeschke to change the oscillation amplitude to 5-30 micrometers, because Dini teaches that this oscillation amplitude is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tome reproduction of printings, and such an oscillation amplitude creates a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge.

It would have been obvious to one having ordinary skill in the art to modify Jeschke to have an oscillation frequency within a range of 200 Hz to 10kHz, because Dini teaches that such an oscillation frequency is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tone reproduction of printings.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Jeschke to include a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller, because Dudley teaches that glazing rollers assure the best possible distribution of ink on the drum.

i. Regarding claim 14:

Jeschke teaches an inking unit (Figure 1)/printing press (col. 1, lines 1-2) in a printing press, comprising an ink-metering device (1, Fig. 1) having at least one metering element (6, Fig. 1) operatively engaging with a roller (2, Fig. 1), said roller being one of an ink form roller and a roller operatively engaging with an ink form roller, said metering unit being capable of producing an ink pattern being even over a print width of said roller (the metering elements of Jeschke are controllable to such an extent that they could be set to create the same ink profile, and therefor, an ink pattern even over the width of the roller) and an oscillation device (11,13, Fig. 1) assigned to said metering element for mounting said metering element so that it is oscillatable between: an engaging position and a spaced-away position with respect to the metering element; and a spaced-away position of said metering element in which said metering element is lifted to an outlet height wherein said metering element is lifted to an outlet height (col. 4, lines 1-15) from said roller.

Jeschke does not teach an outlet height of at least 20 micrometers and less than 40 micrometers; a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller.

Dini teaches a method and apparatus for removing surplus ink on printing cylinders, including: an oscillating metering element (3, Fig. 4); an oscillation frequency in the range of 5 to 200 kHz (col. 2, lines 45-47); an oscillation amplitude from 5 to 30 micrometers (col. 2, lines 52-53); that such an oscillation frequency is advantageous for creating a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer

past the doctor blade edge (col. 1, lines 64-68); the invention is applicable to any situation where it is desired to control the thickness of a liquid layer applied to a surface (col. 4, lines 62-64); the invention is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder (col. 1, lines 34-37) and in eliminating inconsistency of tome reproduction of printings (col. 1, lines 45-47).

Dudley teaches an ink-metering device including a metering element (15, Fig. 1) operatively engaging with a roller (14, Fig. 1), and a plurality of glazing rollers (16, Fig. 1) disposed downline from said metering element, each of said glazing rollers being in rolling contact exclusively with said roller. The glazing rollers assure the best possible distribution of ink on the drum (p. 1, lines 60-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jeschke to change the oscillation amplitude to 5-30 micrometers, because Dini teaches that this oscillation amplitude is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tome reproduction of printings, and such an oscillation amplitude creates a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Jeschke to include a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said

glazing rollers being in rolling contact exclusively with said roller, because Dudley teaches that glazing rollers assure the best possible distribution of ink on the drum.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke in view of Dini and Dudley as applied to claim 1 above, and further in view of Cappel et al., US 3,913,479 (Cappel).

The combination of Jeschke, Dini, and Dudley teaches all that is claimed as discussed in the rejection of claim 1 above, including wherein said metering element is a metering blade having a working region terminating in a cutting edge (Jeschke, 7, Fig. 1).

The combination of Jeschke, Dini, and Dudley does not teach said working region of said metering blade having a cross section thickness which remains constant.

Cappel teaches wherein said metering element is a metering blade (75, Fig. 1) having a working region terminating in a cutting edge, said working region of said metering blade having a cross-section thickness which remains constant (Fig. 3). Cappel teaches that such a blade as part of the system is advantageous for reducing construction costs and for operating for long periods substantially free of maintenance problems (col. 1, lines 38-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Jeschke wherein said working region of said metering blade has a cross-section thickness that remains constant, because Cappel teaches that such a metering blade is advantageous for reducing construction costs and for operating for long periods substantially free of maintenance problems.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke in view of Dini and Dudley and Konrad et al., US 2002/0014171 A1 (Konrad).

Jeschke teaches an inking unit (Figure 1)/printing press (col. 1, lines 1-2) in a printing press, comprising an ink-metering device (1, Fig. 1) having at least one metering element (6, Fig. 1) operatively engaging with a roller (2, Fig. 1), said roller being one of an ink form roller and a roller operatively engaging with an ink form roller, and an oscillation device (11,13, Fig. 1) assigned to said metering element for mounting said metering element so that it is oscillatable between: an engaging position and a spaced-away position with respect to the metering element; and a spaced-away position of said metering element in which said metering element is lifted to an outlet height wherein said metering element is lifted to an outlet height (col. 4, lines 1-15) from said roller.

Jeschke does not teach an outlet height of at least 20 micrometers and less than 40 micrometers; a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller, said glazing rollers having one of a rubber-elastic peripheral surface and an elastomeric peripheral surface.

Dini teaches a method and apparatus for removing surplus ink on printing cylinders, including: an oscillating metering element (3, Fig. 4); an oscillation frequency in the range of 5 to 200 kHz (col. 2, lines 45-47); an oscillation amplitude from 5 to 30 micrometers (col. 2, lines 52-53); that such an oscillation frequency is advantageous for creating a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer

past the doctor blade edge (col. 1, lines 64-68); the invention is applicable to any situation where it is desired to control the thickness of a liquid layer applied to a surface (col. 4, lines 62-64); the invention is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder (col. 1, lines 34-37) and in eliminating inconsistency of tome reproduction of printings (col. 1, lines 45-47).

Dudley teaches an ink-metering device including a metering element (15, Fig. 1) operatively engaging with a roller (14, Fig. 1), and a plurality of glazing rollers (16, Fig. 1) disposed downline from said metering element, each of said glazing rollers being in rolling contact exclusively with said roller. The glazing rollers assure the best possible distribution of ink on the drum (p. 1, lines 60-62). Dudley is silent as to the material composition of the glazing rollers.

Konrad teaches a short inking unit with a rider roller (5, Fig. 4) with an outer peripheral surface of silicone rubber (¶ 0050), a material which does not promote adhesion of ink.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jeschke to change the oscillation amplitude to 5-30 micrometers, because Dini teaches that this oscillation amplitude is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tome reproduction of printings, and such an oscillation amplitude creates a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jeschke to include a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller, because Dudley teaches that glazing rollers assure the best possible distribution of ink on the drum.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jeschke wherein said glazing rollers having a rubber-elastic peripheral surface, because Konrad teaches that a silicone-rubber surface is advantageous for preventing ink from collecting on the glazing roller.

Response to Arguments

5. Applicant's arguments filed 28 January 2005 with respect to claims 1-5, 7-10 and 12-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo T. Hinze
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08 April 2005

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